characters which serve to separate it from the genus *Oochoristica*, the present writer proposes the new name *O. lygosomatis* for *O. parva* Baylis, 1929.

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ZOOLOGY.—*A new species of amphipod of the genus* Grandidierella *and a new record for* Melita nitida *from Sinaloa, Mexico.*[1]

CLARENCE R. SHOEMAKER, U. S. National Museum. (Communicated by MARY J. RATHBUN.)

In 1923 Mr. W. E. Chapman, American Consul, at Mazatlan, Sinaloa, Mexico, sent some amphipods to the U. S. National Museum which were taken by Mr. Harry Notton in connection with the shrimp investigations which he was carrying on at Mazatlan. The material contained two species, *Melita nitida* Smith, which is reported for the first time from the west coast of America, and a species that I believe to be new to science and which I designate as *Grandidierella nottoni.*

GRANDIDIERELLA Coutière, 1904

The first species of this genus, when described by Giles in 1888, was placed in the genus *Microdeutopus* with which it, however, did not agree by the possession of a uniramous third uropod. Coutière in 1904, when he described his new species, *mahafalensis*, created the genus *Grandidierella* to receive it, and considered its affinities closer to the *Corophiidae*, in which family he placed it. Coutière, and later Stebbing in 1908, called attention to the close alliance of *Grandidierella* with both *Unciola* and *Chevreuxius*, and Stebbing placed his new species, *G. bonnieri*, in the *Corophiidae*. Chilton (1921, p. 549) said, "The

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general resemblance of the animals to *Microdeutopus* and to *Aora* is so great that in my opinion the genus should be placed under the *Aoridae*. The third uropods certainly are one-branched, but I do not consider this sufficient to outweigh the resemblance in all other characters which, as will be seen from the following description, is very close." He lays particular stress upon the resemblance of the first gnathopods of the male, the uropods, and the telson to those of *Microdeutopus*. Schellenberg (1925, p. 164) calls attention to the very indefinite limits of the family *Corophiidae* as established by Stebbing in *Das Tierreich*, and suggests the alteration of the family *Aoridae* to include genera with either biramous or uniramous third uropods in order to include the genus *Grandidierella*.

In comparing *Grandidierella* with the genera now placed under the *Corophiidae*, there appear to be so many characters in common that it seems more natural to include it in this family rather than to alter the *Aoridae* for its reception. *Grandidierella* is depressed, possesses a very strongly developed second antenna in the male, has very small side-plates which are not in continuity, and has the third uropods uniramous. These characters are very strongly emphasized in *Grandidierella elongata* Chevreux (1925, p. 393, fig. 32) and in the present species, and are also possessed by the genera *Corophium*, *Unciola*, and *Siphonoecetes*. *Chevreuxius*, *Ericthonius*, *Neohela*, *and Unciolella* are depressed with small disconnected side-plates, and have uniramous third uropods, but without the strongly developed second antenna. *Camacho* is depressed and has the small disconnected side-plates, but has a minute second ramus to third uropods. *Cerapus* is depressed, has the separated side-plates, and uniramous third uropods, but has the first antennae strongly developed. In the genera *Cerapus*, *Corophium*, *Ericthonius*, and *Siphonoecetes*, the second gnathopods are larger than the first, but in *Neohela*, *Unciola*, *Chevreuxius*, and *Unciolella* the first gnathopods are larger than the second. In the genera *Chevreuxius*, *Unciolella*, and *Grandidierella* the first gnathopod of the male is strongly developed and very similar in structure, the fifth joint being enlarged with a short, transverse palm defined by a strong tooth at the lower distal extremity. The second gnathopods in these three genera are very similar in structure, being weak, slender, and subchelate. In the species of *Grandidierella* here described, besides other points of resemblance, the fifth or last peraeopod and the second antenna of the male bear a very close resemblance to *Corophium;* the fourth and fifth joints of this antenna bearing the characteristic distal tooth of that genus.

Chevreux (1925, p. 392), when describing his species, *G. elongata*, placed it in the family *Corophiidae*.

In view of the foregoing considerations, it would seem more natural to place *Grandidierella* with other closely related genera in the family *Corophiidae* rather than alter the characters of the family *Aoridae* to accommodate it.

Grandidierella nottoni, n. sp.

Male.—Head with lateral lobes well developed and bearing the ill defined, black eye. Antenna 1 with first joint stouter, but a little shorter than second, third joint about one-third the length of second, flagellum nearly

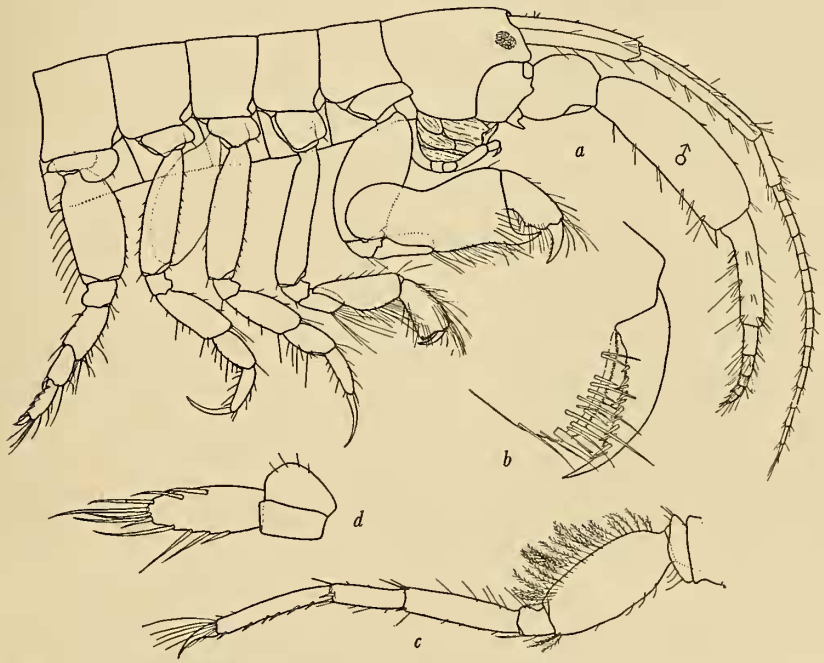

Fig. 1.—*Grandidierella nottoni*, new species, male. *a*, anterior portion of animal. *b*, end of gnathopod 2, greatly enlarged. *c*, peraeopod 5, same scale as *a*. *d*, uropod 3, greatly enlarged.

as long as peduncle and composed of fifteen joints, accessory flagellum minute, about half the length of the first joint of primary flagellum. Antenna 2 robust, but slightly shorter than antenna 1, first and third joints very prominent and strongly developed, fourth joint very strongly developed and nearly twice as long as fifth, flagellum shorter than fifth joint and composed of two long joints and four shorter joints. The fourth and fifth joints of the second antenna of the male bear a distal tooth, thus completing the very close resemblance of this antenna to that of the male *Corophium*. The mouthparts bear a very close resemblance to those figured by Coutière (1904, p. 5, figs. 6–9) for *G. mahafalensis*. Gnathopod 1 is very robust and strong, the fifth joint being produced backward into a very prominent rounding lobe

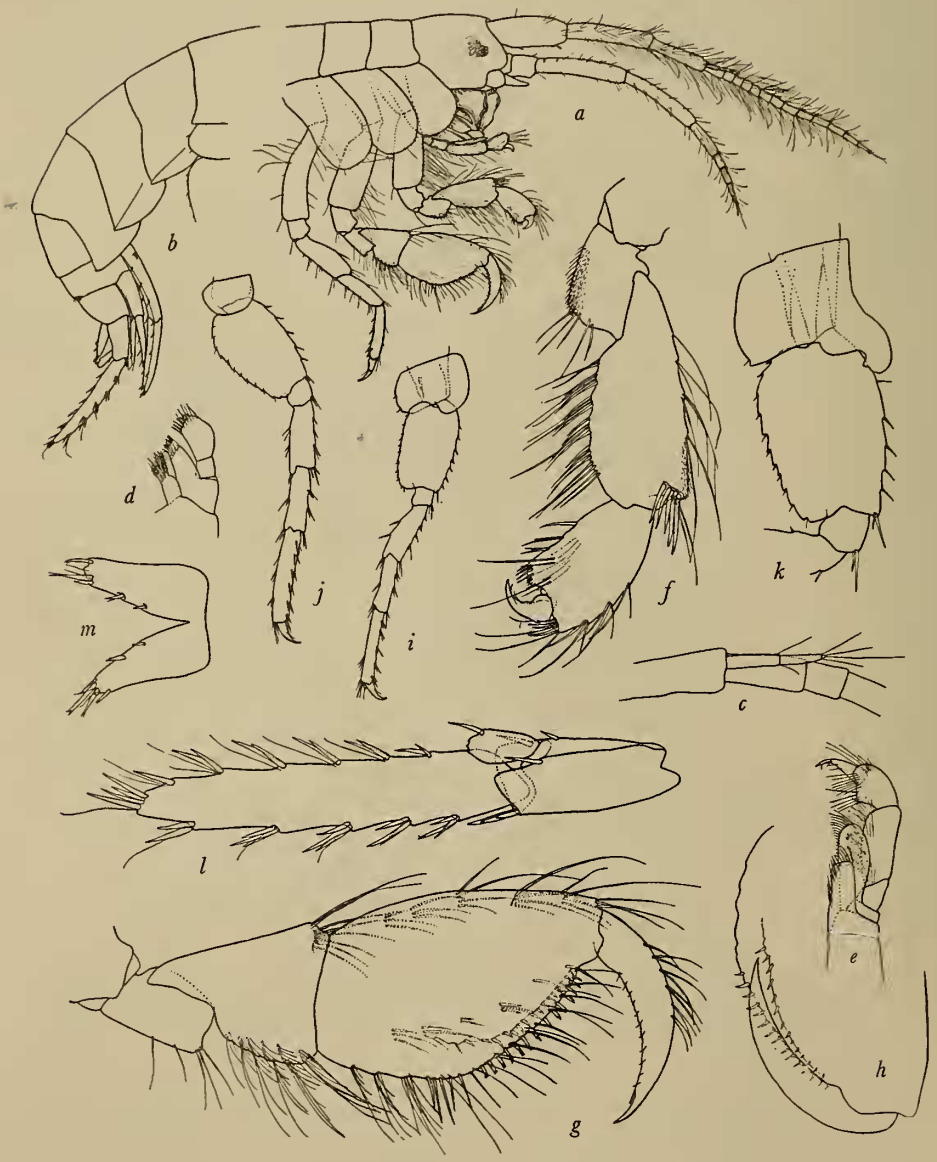

Fig. 2.—*Melita nitida* Smith, male from Mazatlan. *a*, anterior portion of animal. *b*, posterior portion of animal. *c*, accessory flagellum, greatly enlarged. *d*, maxilla 1. *e*, maxilliped. *f*, gnathopod 1. *g*, gnathopod 2. *h*, inside of gnathopod 2 showing shallow groove bounded by spines into which the dactyl fits. *i*, peraeopod 3, same scale as *a* and *b*. *j*, peraeopod 5, same scale as *a* and *b*. *k*, peraeopod 4 of female. *l*, uropod 3. *m*, telson.

much as figured by Chilton (1921, p. 550, figs. 10,n and 10,o) for *G. megnae* but there is not the slightest suggestion of a forward-pointing tooth in the center of the palm either in young or old individuals, nor is the small tooth figured by Chilton (1921, p. 550, fig. 10,e) on the posterior margin of the fifth joint present in any of these specimens from Mazatlan; the prominent tooth on the sixth joint of Chilton's figures (1921, p. 550, figs. 10,n and 10,o) is not present in any of my specimens. Gnathopod 2 bears a close resemblance to Chilton's figure (1921, p. 550, fig. 10,g), except that in the present specimens the second joint is comparatively longer and slenderer and the palm is more nearly transverse. Peraeopods 1 and 2 bear a close resemblance to those of the genera *Microdeutopus* and *Corophium*, but the seventh joint is as long as the sixth, as in *Corophium*. Peraeopods 3 to 5 increasing consecutively in length, peraeopod 5 closely resembling that of *Corophium*, the second joint bearing posterior plumose marginal setae. Side-plates all very shallow, narrower than their respective segments and not in continuity. Pleon segments 1 to 3 with postero-lateral corners broadly rounding. Uropod 1 extending back slightly farther than 2, and the peduncle without a stout spine at distal extremity, as figured by Coutière (1904, fig. 17) for *G. mahafalensis*. Uropod 2 extending back very slightly farther than 3. Telson wider than long, distally truncate, and having a small seta at either lateral corner.

Length.—Male about 7 mm.

The female in general like the male. Antenna 2 not so strongly developed, but the lower lateral margin of the head deeply incised to receive the enlarged first peduncular joint as in the male. The fourth joint of antenna 2 bears on the lower inner margin a distal forward-pointing spine and another similar spine nearer the proximal end. In younger females the distal spine only appears to be present. Gnathopod 1 not much larger than 2 and simply subchelate, the oblique evenly convex distal margin of the sixth joint forming the palm against which the seventh joint exactly fits. Gnathopod 2 like that of the male, though somewhat proportionately shorter. Peraeopods and uropods as in the male. Female about as long as male.

Type.—Male, taken at Mazatlan, Sinaloa, Mexico, February, 1923, by Harry Notton; water brackish, salinity, 13.5 per mill. U.S.N.M. Cat. No. 69742.

Chilton demonstrated that *Grandidierella megnae* (Giles) was subject to great variation in some of its characters, and concluded that *G. mahafalensis* Coutière and *G. bonnieri* Stebbing were synonyms of Giles's earlier species. Later authors have adopted Chilton's view. Recently Dr. Stephensen (1933, pp. 434 and 446) has reported *G. megnae* as being extremely common in shallow salt-water pools, and in cisterns, on the islands of Bonaire and Curaçao off the coast of Venezuela.

As neither young nor old males of the present Mexican specimens show any vestige of a central palmar tooth, nor a tooth on the under side of the sixth joint of gnathopod 1, and as Chilton's figure (1921, p. 550, fig. 10,c) of the second antenna of a mature male does not show the *Corophium*-like development of the present specimens, I have concluded that they represent a new species.

The collection of the U. S. National Museum contains specimens of what I believe to be *G. megnae* (Giles) from two new localities from the West Indian region.

The first lot, consisting of males and females, was taken in February, 1933, by Mr. R. M. Bond from Étang Saumâtre, a brackish lake of Haiti. The largest male, measuring about 5 mm. in length, has in gnathopod 1 only the rudiment of the central palmar tooth, no lower marginal tooth on fifth joint, and no tooth on the under margin of the sixth joint. The largest female with eggs bears on the lower inner margin of the fourth joint of antenna 2 four evenly placed forward-pointing spines. These spines are quite conspicuous, but apparently have not been mentioned in any of the descriptions heretofore.

The second lot consists of three male specimens taken from the stomach of a flounder at Tortugas, Florida during the summer of 1933 by Dr. Harold W. Manter. The largest of the specimens has the first gnathopod nearly as figured by Chilton (1921, p. 550, fig. 10,f). It bears the small central palmar tooth and the small marginal tooth on the lower margin of the fifth joint, but lacks the tooth on the under margin of the sixth joint as does Chilton's. The two smaller specimens bear the central palmar tooth, but not the small tooth on the lower margin. The largest specimen only retains one of the second antennae which appears to be much slenderer than that figured by Chilton (1921, p. 550, fig. 10,a). The first antenna of this male is considerably longer than the second and proportionately much slenderer than that figured by Chilton (1921, p. 550, fig. 10,a). The largest of the specimens measures about 3.5 mm.

As far as we can learn from the published records of the genus *Grandidierella*, it appears to inhabit mainly brackish waters. Tattersall records it from fresh water in China, Stephensen from slightly saline cistern water in Bonaire Island. The specimens from Tortugas, however, were found in the ordinary water of the Gulf of Mexico in the vicinity of the Gulf Stream. The species here described, *G. nottoni*, was taken in brackish water, salinity 13.5 per mill.

MELITA NITIDA Smith

This species was described by Prof. S. I. Smith in 1873 from the coast of New England. Since then it has been reported from widely separated localities along the east coast of the United States as far south as Louisiana, by Paulmier (1905, p. 162), Holmes (1905, p. 505), Pearse (1912, p. 371), Fowler (1912, p. 187), and Kunkel (1918, p. 99).

The present specimens taken in February, 1923, by Mr. Harry Notton are the first to be recorded from the west coast of America. In 1933 Dr. Waldo L. Schmitt, while a member of the Hancock Galapagos Expedition, collected specimens at La Plata Island, Ecuador; Cocos Island, southwest of Costa Rica; and Bahia Honda, Panama.

In west coast specimens the flagellum of antenna 1 is a little shorter than the peduncle and not longer, as Smith (1873, p. 560) records of the New England specimens. The fourth joint of antenna 2 is slightly longer than the second joint of antenna 1 and not scarcely shorter, as stated by Smith. The seventh joint of gnathopod 1 of the male projects inward nearly at a right angle to the sixth joint, as recorded by Smith, but this joint is perfectly developed to fit the palm, so it is probable that the animal has the ability to close it against the palm if necessary. In gnathopod 2 of the male, the dactyl closes against a row of short spines on the inside surface of the sixth joint. As in Smith's specimens, the fifth pleon segment bears posteriorly a row of three or four short spines on either side of the median dorsal line.

In the female the sixth side-plate has the lower front corner produced into a peculiar and characteristic lobe much as that of *Melita palmata* (Montagu).

The largest specimens that I have seen from the west coast of America measure about 6 mm., while Smith gives 7–9 mm. for the New England specimens.

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